

Technical Training Competency 2.3

Competency 2.3 Technical training personnel shall demonstrate a familiarity level knowledge of the training and qualification requirements in the following DOE Orders (or associated rules) sufficient to evaluate the applicability and implementation of the requirements at a facility.

- DOE Order 5480.19 “Conduct of Operations”
- DOE Order 4330.4 “Maintenance Management”
- DOE Order 5500.1 “Emergency Management System”
- DOE Order 5700.6 “Quality Assurance”
- DOE Radiological Controls Manual

1. Supporting Knowledge and/or Skills

- a. Using the above listed Orders and Standards as a reference, state and describe the training and qualification requirements contained in each of them.
- b. Using the above listed Orders and Standards as a reference, describe the role of the technical training personnel in evaluating or implementing the training and/or qualification requirements.
- c. Describe the interrelationship of the training requirements listed in the various DOE Orders (or associated rules), including DOE Order 5480.20.
- d. Describe the process for determining adequate compliance with the requirements listed in the above Orders, and the severity and consequences associated with not being in compliance.

2. Self-Study Activities (corresponding to the intent of the above competency)

Below are two web sites containing many of the references you may need.

Web Sites		
Organization	Site Location	Notes
Department of Energy	http://wastenot.inel.gov/cted/stdguido.html	DOE Standards, Guides, and Orders
U.S. House of Representatives	http://law.house.gov/cfr.htm	Searchable Code of Federal Regulations

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Read DOE Order 5480.19, *Conduct of Operations Requirements for DOE Facilities*, Attachment I, Chapter V, pages I-33 through I-35.

EXERCISE 2.3-A What is on-shift training?

EXERCISE 2.3-B List four of the six aspects of training activities for on-shift training.

Review DOE Order 4330.4, *Maintenance Management Program*, chapter II, section 3 and section 14.3.2, and chapter IV, section 3.1.4.

EXERCISE 2.3-C State the performance objective of the Maintenance Management Program Training and Qualification program.

EXERCISE 2.3-D Describe the implementation of training process from Section 3.1.4.

Review DOE Order 5700.6, *Quality Assurance*, Criterion 2, Personnel Training and Qualification, and Criterion 9, Management Assessment.

EXERCISE 2.3-E State the training and qualification requirements of DOE Order 5700.6.

EXERCISE 2.3-F Describe how the training and qualification program is evaluated.

EXERCISE 2.3-G State the method used to assess the quality assurance program.

Read the DOE *Radiological Control Manual*, pages I through iii, and Chapter 6, Training and Qualification.

EXERCISE 2.3-H State the purpose of the training requirements and qualification standards in the DOE *Radiological Control Manual*.

EXERCISE 2.3-I Describe how the radiological program is evaluated.

EXERCISE 2.3-J Is there oversight for determining adequate compliance?

Read DOE Order 5500.1B, *Emergency Management System, Purpose, Policy and Concept of Operation*.

EXERCISE 2.3-K State the purpose of DOE Order 5500.1B, *Emergency Management System*.

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EXERCISE 2.3-L Describe DOE's policy on maintaining an emergency management system.

EXERCISE 2.3-M List the components of the emergency management teams.

3. Summary

The interrelationship of training requirements contained in DOE Order 5480.20A and the various DOE Orders (or associated rules) identified in competency 2.3 is intended to ensure that the development and implementation of contractor-administered training programs provide consistent and effective training for personnel and the safe and efficient operation of DOE facilities.

4. Exercise Solutions

EXERCISE 2.3-A What is on-shift training?

ANSWER 2.3-A On-shift training is the portion of an operator qualification program in which the trainee receives training within the job environment and with as much hands-on experience as possible.

EXERCISE 2.3-B List four of the six aspects of training activities for on-shift training.

ANSWER 2.3-B Any four of the following are acceptable:

- On-shift training should adhere to established training programs so that instructional uniformity will be maintained.
- On-shift instructors/evaluators should be qualified for activities they perform to ensure both correct operation and quality training.
- Trainees should be supervised by qualified operators so that unqualified personnel do not make mistakes that could affect safety.
- The operations supervisor (or equivalent) should approve the training program so that it will best meet operations needs.
- Policies that direct how trainees may be used to support operations work activities should be developed. These policies should ensure that trainee personnel are effectively and appropriately used and that they are aware of all operating limits and hazards.
- On-shift training should be appropriately documented.

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EXERCISE 2.3-C State the performance objective of the Maintenance Management Program Training and Qualification program.

ANSWER 2.3-C The training and qualification program should develop and maintain the knowledge and skills required by maintenance personnel to effectively perform maintenance activities.

EXERCISE 2.3-D Describe, from section 3.1.4, the process for the implementation of training.

ANSWER 2.3-D Training implementation is coordinated between the maintenance and training organizations to prepare the training schedule, determine who should attend, and ensure qualified instructors are available to teach the courses.

EXERCISE 2.3-E State the training and qualification requirements of DOE Order 5700.6.

ANSWER 2.3-E

- Personnel shall be trained and qualified to ensure they are capable of performing their assigned work. Personnel shall be provided continuing training to ensure that job proficiency is maintained.
- Qualification requirements should be established for specific job categories, such as operators, designers, managers, supervisors, and independent assessment personnel.
- Training should ensure the worker understands the processes and tools he or she is using, the extent and sources of variability in those processes and tools, and the degree to which he or she does and does not have control over that variability.
- Training plans for management personnel should include professional managerial, communication, and interpersonal skills.
- Personnel performing work that requires special skills or abilities should be qualified prior to performing work. Qualification should include demonstrated proficiency of each candidate and occur periodically thereafter to maintain skills to meet current practices.

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EXERCISE 2.3-F Describe how the training and qualification program is evaluated.

ANSWER 2.3-F Training is subject to ongoing review to determine program and instruction effectiveness. Training and qualification should be upgraded whenever needed improvements or other enhancements are identified.

EXERCISE 2.3-G State the method used to assess the quality assurance program.

ANSWER 2.3-G Management at all levels shall periodically assess the integrated quality assurance program and its performance. Problems that hinder the organization from achieving its objectives shall be identified and corrected.

EXERCISE 2.3-H State the purpose of the training requirements and qualification standards in the DOE *Radiological Control Manual*.

ANSWER 2.3-H The requirements are established to ensure that personnel have the training to work safely in and around radiological areas and to maintain their individual radiation exposures and the radiation exposures of others as low as reasonably achievable (ALARA). Training requirements in this chapter apply to personnel entering DOE sites. The qualification standards define the requirements for demonstrating completion of training. Signatures on the forms will document satisfactory proficiency.

EXERCISE 2.3-I Describe how the radiological program is evaluated.

ANSWER 2.3-I Verification of the effectiveness of radiological control training should be accomplished by surveying a limited subset of former students in the workplace. This verification is in addition to performance evaluations routinely performed by training departments. The survey should be performed by radiological control managers and supervisors, quality assurance personnel, or senior instructors after the former student has had the opportunity to perform work for several months and the results are documented.

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EXERCISE 2.3-J Is there oversight for determining adequate compliance?

ANSWER 2.3-J It is DOE's policy to conduct oversight to ensure Departmental requirements are being complied with and appropriate radiological work practices are being implemented.

EXERCISE 2.3-K State the purpose of DOE Order 5500.1B, *Emergency Management System*.

ANSWER 2.3-K DOE Order 5500.1B establishes overall policy and requirements for the DOE Emergency Management System (EMS). The EMS provides the framework for development, coordination, and direction of planning, preparedness, and readiness assurance activities. This Order addresses responses to Operational, Energy, and Continuity of Government (COG) emergencies involving DOE or requiring DOE assistance.

EXERCISE 2.3-L Describe DOE's policy on maintaining an emergency management system.

ANSWER 2.3-L DOE's policy is to develop and maintain an emergency management system capable of responding to and mitigating the consequences resulting from Operational, Energy, and COG emergencies.

EXERCISE 2.3-M List the components of the emergency management teams.

ANSWER 2.3-M In response to an emergency, an emergency management team is formed at the facility, field element, and DOE HQ levels.